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ABSTRACT

Presented are seven papers given at a 1973 conference on European braille by the World Council for the Welfare of the Blind. Arne Husveg sees braille as a continuing indispensable aid and recommends legislation giving the blind the right to free instruction and materials. The use of special braille systems of mathematical, physical, and chemical notation are considered by Dr. R. Nikolussi who notes the lack of a uniform international technical braille notation. J. Vinding examines modern methods and transcribing and printing braille such as computerized reading of inkprint, translating into braille symbols, and printing. Possibilities for international cooperation discussed by A. Ammannato are the establishment of an European center for the manufacture and sale of braille paper and the free distribution of braille materials among nations. D. Bell focuses on the importance of providing special periodicals in braille and on tape. An international survey on the blind person as reader, listener, and buyer of literature is reported by D. Spychalski. Recommendations from the conference center on: the continuing importance of braille; the importance of special notation, signs, and systems in braille; transcription and printing; the need for cooperation in production; the need for more periodicals for the blind; and the need for improved international lending arrangements. Additionally recommended by the conference is a World Braille Year in 1975 to further the use of braille. (DB)

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EUROPEAN BRAILLE CONFERENCE

arranged by the European Regional Committee of
The World Council for the Welfare of the Blind
in co-operation with
Norges Blindeforbund (the Norwegian Blind Organization)
in Oslo, 26-28 September 1973

PAPERS AND RECOMMENDATIONS

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Braille - an indispensable aid to the blind.

Man is a sceptical animal. He is seldom content with what he has, but is always on the move exploring new avenues. It is man's privilege to question old values, and indeed, without this inborn scepticism progress would be unthinkable.

The scientific and technical revolution of the last decades has furnished the blind person with new and effective weapons in the fight to achieve cultural and spiritual emancipation and independence. However, in the rapture over new methods and inventions one should be careful not to neglect the old and well-tried weapons in the blind fighter's armoury - weapons which have proved their worth through a century and a half, and which will continue to serve the blind faithfully in the long struggle ahead.

One should indeed take the time to read, think and question - but the questions put should be objective and to the point.

When the talking book and the tape recorder entered the arena of blind welfare, many persons prominent in the organizations of the blind and institutions for the blind foresaw the end of braille as a means of securing the professional and spiritual independence of the blind. Most of them have since changed their minds, but even today voices can be heard predicting a gloomy future for braille. They point to statistics showing a relative decrease in the number of readers making use of braille lending libraries and a corresponding increase in the number of readers of talking books; thus suggesting a trend which will lead to the eventual replacement of braille by talking books and other technical apparatus in the field of communication.

Statistics and figures may be both a help and an impediment in the search for truth. Everything depends on the way in which the material is used.

I recall an example from the U.S.A., and although I should not like to swear to the truth of the story, I think it illustrates an important point. Apparently the producers of beds in America were threatened with economic ruin through the publication of statistics proving that 97% of the population died in their beds. So people changed to sofas. However, soon new statistics were published, this time pointing out that a great and increasing number of people died on the sofa. Thus ended a short and hectic boom in the sofa-producing industry.

If statistics and figures are to serve as helpful friends, it is imperative that the questions "what?","how?" and "why?" are put and answered objectively. In considering figures relating to the number of braille readers, a relevant question would be:

How much is done to convince the individual blind person of the importance and value of braille to him or her personally?

We have in Norway examples of persons over 80 having learned braille and becoming eager readers and writers of braille.

Further: What is being done to make braille easy to teach, to learn and to read ? The trend in most countries seems to me to go in the opposite direction as ever more complicated systems of abbreviations are introduced. Might not something be learned from the fact that two European countries, Italy and the Soviet Union, have no system of abbreviated braille at all, and that the proportion of braille readers in these countries is particularly high ?

Wherein lies then the specific value of braille ?

Braille remains the only means by which the blind person can write on paper and afterwards read what he has written. It may be argued that this is no longer important, as the blind person can read his messages on to tape and listen to it at leisure. Practising braille-readers will, however, point out that no tape-recorder or cassette-player can match braille for comfort and efficiency in writing a quick message, making notes, or, for example, making use of notes during a talk or lecture, as I am in fact doing right now. I am fully aware that methods have been developed by which the cassetteplayer can be used by lecturers instead of written notes, but nobody will convince me that a person with a real choice, that is with a professional knowledge of braille, would be in any doubt as to which system is preferable.

In the world of today, the ability to read and write has become the hallmark of knowledge, personal standing and independence, and quite rightly so. In all countries the fight against analphabetism is given high priority, and the international standing of a country is to a great extent measured by its success in this important field. In my opinion the blind person who cannot read and write ordinary print and has not learned braille, must be considered a technical analphabet. This is no reflection on that person's intelligence or professional qualifications, but simply a translation into plain language of the word "analphabetism" - that is, "the lack of ability to read or write". Without in any way wanting to reduce the importance of the tape-recorder, I may perhaps be allowed to make the point that even a chimpansee can be taught to operate a cassett-player, while writing braille and ordinary print until now has been the privilege of human beings only.

But, joking apart, even the most ardent lover of braille must admit that there are groups, which through no fault of their own, are excluded from the benefit of learning braille. For these groups the different kinds of tape-recorders will have to serve as useful substitutes and will indeed in most cases, through personal adaptation and routine, come to serve the blind person well as a means of reading and active communication. But it should be pointed out that in this case there is no possibility of choosing between two systems.

Braille is of special value and importance in fields of education and employment. I have already mentioned the usefulness of braille in making notes. But braille also contributes in hundreds of other ways to making the blind person independent in the home or at work. Consider the housewife and her cookerybook and knitting patterns and the officeworker with his need for filed information such as lists of

addresses and telephone numbers, time schedules and so forth. One of my best friends is a blind social worker employed by the Norwegian Blind Organisation. He has a complete file in braille of all the data regarding his past and present clients, a file which is added to every day. He is completely independent in his work - thanks to braille - and could not imagine a future without braille.

There is general agreement that the talking book offers a useful alternative to braille as far as light literature is concerned, although many a confirmed braillist will prefer to read with his fingers rather than listen to a book. In some fields, however, braille stands on its own, - that is, in certain types of scientific literature (philology, mathematics, physics, chemistry, to mention some), in reference books and in music literature. It goes without saying that a blind person needing daily access to these areas of literature would be severely handicapped if he could not make use of braille books. Indeed, in some cases it is hard to imagine how he could manage at all.

As long as I can remember the press has, with monotonous regularity, brought sensational reports of new inventions making it possible for blind people to read ordinary print. On closer inspection the mountain invariably turns out to be a mouse, and a dead mouse at that. However, certain undoubted breakthroughs have been made lately. I am thinking of the Opticon and other apparatus constructed on similar lines. It may well be that these new types of reading apparatus in time may take the place of braille in some fields, although I doubt it. And what is more, I have a sneaking suspicion that, when the perfect reading machine for the blind is eventually developed, it will turn out to be a machine converting ordinary print into braille.

Summing up, it is my considered opinion that

1. The importance of braille in the main remains undiminished;
2. It is to a large extent the fault of organisations of the blind and institutions for the blind - not to mention the political authorities - if sufficient numbers of blind people are not encouraged to learn and practice braille;
3. Braille has its use in daily life for the housewife as well as for the person at work;
4. Ready access to certain kinds of educational and scientific literature, reference books and music literature would, but for braille, be barred to the blind person.

Finally, braille represents the most effective weapon in the struggle to conquer technical analphabetism and to achieve complete intellectual and spiritual freedom and equality.

The blind are a minority, and the world will never be reconstructed to suit the blind. Therefore the blind person must adapt himself to the world as it is, and use every means at his disposal of improving his functional ability.

There is a door to be opened, and the key is at hand. The door leads to knowledge, efficiency, freedom and independence. The key is braille.

It is the duty of the organisations of the blind and institutions for the blind to see to it that the key is not made too heavy for the majority of the blind people to carry. Braille must be made simple to learn and simple to read. Its relative worth depends on the numbers of users. Braille should be the treasured property of all blind people, not the privilege of a few experts.

It should be a matter of honour for every country and society to introduce legislation giving to all blind people the right to free instruction in braille and all the equipment necessary to learn and practice braille. It is the solemn duty of all organisations of and for the blind to do their utmost to make sure that society does not shirk its responsibility.

Arne Husveg
General Secretary.

AH/ah

Special Braille Systems and
the Situ ation regarding their International Standardization.

At the beginning of this paper I feel obliged to say that I have studied neither mathematics, physics nor chemistry, but that I am a philologist. To my surprise and against my will I was given the rather thankless task of drawing a picture of the international situation regarding braille mathematical, physical and chemical notation before this audience. After some hesitation I decided to accept this paper, especially because there is no question here of discussing each symbol, but rather of investigating whether and to what extent different systems are used in other countries. It is obvious from the nature of the subject, that this paper cannot be complete because of the shortness of time at my disposal, a fact for which I beg your indulgence.

During the conference of the Braille Commission at Monza on the 1st and 2nd December last year, it was generally regretted that there exist several different shorthand braille systems, which makes an international exchange of braille books very difficult, or practically impossible. At the same time, the wish was expressed to simplify the shorthand systems in use so that they would be easy to learn. Though only a relatively small group is interested in mathematical, physical and chemical braille notation, the use of several different systems is a great disadvantage and a handicap for all interested in the subject, as works that are difficult to transcribe and are produced in one country, cannot be used by everybody. The wish for an international uniform systems is especially strong in some groups, but the possibility of achieving this seems remote. Some people are of the opinion that, having become accustomed to one system it would mean a great handicap to change to another, but admit that it would be a great advantage if each work of mathematics, physics and chemistry could be used by all. It is a fact that the systems used in some European and other countries differ from one another to a larger or smaller degree. Here I would like to add that in the notation of physics one can generally manage with the mathematical symbols, so that we can do without a special discussion of the notation for physics.

In order to get a clear impression of the present situation it is necessary to point out some decisive developments.

1. In 1916 the reform of all yet uncompleted braille systems was proposed in Leipzig at a conference of the "Blinden Geistesarbeiter Deutschlands", "Aller Interessierten an der Herstellung fachwissenschaftlicher Blindenschriftwerke". This conference was called after teachers in Germany and England had already tried to create a mathematical and chemical notation - for instance Schlüter from Neuwied with his mathematical and chemical system, and Taylor (England) with his mathemical and chemical notation. Neither system was satisfactory in respect to the claim of a shortened and yet comprehensible mathematical and chemical notation.

After intensive preparations by some experts who were to work on the creation of a mathematical and chemical system, a complete system was created, printed and put into circulation in 1918. It was first to be examined in regard to its efficiency. In 1929 the system was edited with some supplements and improvements. A further edition was decided upon in 1930, when the system was also published in normal print. Now a system was created which proved to be efficient, though it did not meet all requirements in the printing of difficult works.

2. At the conference for the blind in Vienna 1929, an international commission of 12 members was appointed, who were to create a general international system for mathematics and chemistry. The work of this commission, whose president was the Swede Dr. Nils Juringius, Stockholm, was completed by a commission of three members at Marburg-Lahn in 1937.

3. The report being prepared by Dr. Juringius could not be published because of the war. But it served another member of the commission, the English Colonel Stafford, as a basis for his "International Braille Code of Mathematics and Chemistry". This system was published in braille by the National Institute for the Blind in London in 1941. This short and compact system was generally considered too difficult, and a demand was raised to adapt it to Standard English Braille, and to extract those symbols necessary for elementary mathematics. The "International Braille Code of Mathematics and Chemistry" prepared by Mr. Stafford was similar to "Mathematik- und Chemieschrift für Blinde". In both cases we are concerned with a brief presentation of the complete system for the use of blind mathematicians. Neither publication was comprehensive enough to serve as a work of instruction for blind pupils or as a guide for transcribers. The "International Code" was criticised in England especially by those blind persons and teachers of the blind who were only interested in elementary mathematics. Therefore the International Institute for the Blind requested R.W. Borham and H.N. Lockhead to prepare an introduction to the international notation for mathematics and chemistry for the blind. The two authors made fundamental changes in the "International Code" of 1941.

The first part of this work "The Simplified Presentation of the International Code for Brailling Mathematics", concerning elementary mathematics was published by the National Institute for the Blind in 1949. In 1947, before this publication, the system was examined by a commission of five members in Chicago, whose president was J.B. Curtis. On this occasion some supplements were proposed. In this way the uniformity of this international system was largely destroyed. According to my information there also exists still another English system of mathematics for the blind by prof. W.G. Bickley, with the titles "Transcriber's Guide to the Braille Mathematical Notation" and "Mathematics for the Blind".

4. The blind mathematician dr. van der Mey, who became deaf in consequence of a serious illness, demanded (in contrast to the English system of Bonham and Lockhead) the uniformity and extension of the notation for mathematics and chemistry. So a commission was appointed with the following members: prof.dr. Helmut Epheser,

Karl Britz, Dr. Gerrit van der Mey and dr. Friedrich Mittelsten Scheid. The activity of this commission began in 1950 and ended in 1955 with the publication of the "Neufassung und Vervollständigung des Systems der internationalen Mathematikschrift für Blinde". In this system the development of the symbols in normal print had been taken into consideration. The basis for this system was the one published in 1937 by the international commission of 12 members.

5. The essential advantage of a uniform system is affirmed by many interested persons, and some endeavours have been made - so far without success - to arrive at a uniform presentation of the symbols in the mathematical and chemical notation. A short time ago a group of Spanish experts presented for discussion a series of proposals contained in an elaborate braille document of 195 pages. The title is: "Notation cientifica comparada edicion preparatoria de la notation "U" dirigida por Francisco Rodrigo Dominguez". This document was published in February this year by the Organizacion Nacional de Ciegos Espanoles. These proposals are being examined now, it is therefore too early to say anything about their value and their efficiency. Certainly it is a very thorough work, which also compares the different existing systems. Proposals are made in the preface for the introduction of the "Universal notation" in three phases. The document begins with an elaborate chapter about braille in general and has for its subject the systematical construction of symbols in two forms. But this system, which is considered rather important by some experts in the BRD, differs again greatly from the international system for mathematics and chemistry.

Comparing information, it becomes obvious that there are more or less complete mathematical and chemical notations also in Argentina, Brasil, Japan and France.

It is known that the French blind teacher Borgignon has published a braille mathematic notation which was completed by prof. Antoine and supplemented by D. Morin. I do not know whether only one or whether several different systems are used in France.

Finally, I would like to add that there is one more system used in the USA, the "Nemeth-code", which was devised by a Hungarian. This system differs even in the symbols for numbers.

About 1950 a Japanese system was also published under the title: "An Observation on the Braille-code of Mathematics" by Miss Reiko Ito and Mr. Ikuzo Ozeki, which has only very few symbols similar to ours.

All systems differ more or less from one another, and are used in most cases only by a few persons.

The so-called "Marburger System" of 1955, which is translated into English, is used in the German-speaking countries, the Netherlands, Scandinavia, as well as in most European socialist countries.

At the conference of Paris in 1954 the "World Council for the Welfare of the Blind" decided to convene a congress with the aim of creating a generally efficient braille mathematical and chemical notation system. This would be done after the work on the international musical system for the blind is completed.

I hope to have shown in this short and, I repeat, incomplete paper, the most important developments regarding the notation of mathematics and chemistry for the blind. As you can see, the result of this review is not at all encouraging. Certainly the group of interested persons involved is relatively small, but considering the fact that it is just these persons who have to fulfil special tasks in their profession and in the field of science, the lack of a uniform international notation of mathematics and chemistry is all the more regrettable. Especially so, since difficult mathematical, physical and chemical scientific works can only be transcribed with great difficulty and at great financial cost. It would therefore be a great advantage if works transcribed in braille could be readily used by many persons irrespective of their country of origin. Unfortunately this goal is still far off. We must wait and see whether our Spanish comrades are more lucky with their endeavours. I am not very hopeful.

I hope that the work of our Braille Commission will produce positive ideas, leading to the solution of the problem concerning a uniform notation for mathematics and chemistry for the blind.

Dr. Rudolf Nikolussi.

Modern Methods of Transcribing and Printing Braille

Jørgen Vinding (Denmark).

As you already are aware, Denmark has this year decided to go in for modern production methods for braille. This means that the Danish Association for the Blind has decided to invest the money for setting up a modern production centre for braille. This project will start on October 1st, 1973, and within a year we hope to have the complete production system running.

I will give you some brief historical data before I go on to show how the system will work.

In 1966, I was working with braille production using computers. We set up a prototype to make sure that it was possible to make a translation from inkprint to braille using a computer. This was very soon shown to be possible, and without too many errors. At the same time we started to revise the Danish braille system. I shall not discuss here whether one should have a complicated or very simple braille system, but we made a revision of the Danish braille system and this is now a system with contractions and full word contractions. After the revision was approved, and books were being produced using the new braille system, we worked hard to convince people that a production centre using computers was a new way of making braille. At that time this had already been done in Great Britain, the United States and in Holland, but in these countries they use the computer for the translation phase, which means that you translate the inkprint to braille but still use zinc and embossing machinery for the copying technique. We proposed to set up a new production centre where we would not use embossing techniques but something more modern. As I mentioned before, it was decided in March this year to use this system and try to develop a production centre using these new modern techniques.

The production system is based on three parts:

1. The input, meaning the inkprint we want to translate into braille
2. The translation, which means translation from inkprint to braille using the rules for the use of contractions,
3. the output, copying the braille.

First, the input. In our system input will be punched character by character onto punch cards. That means that you give a book to a key punch operator who transfers each character in the book to the punch card. The text will be transferred character by character and all spaces, special signs, such as comma and dots, will be put into the punch cards. During the process of punching the operator will insert additional symbols into the text to indicate capitalisation, italics, forward line controls like new page, and so on.

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It is obvious that the key punch operator does not need to know the braille rules. Of course, some kind of planning has to be carried out before the book is delivered to the key punch operator, but this is always done when we are producing books with what we call the old-fashioned method. In this new system the planning will be carried out by inserting hand-written text into the book, and the key punch operator will then know what kinds of symbols have to be inserted to give a perfect translation. This is especially necessary when we are talking about diagrams, tables and illustrations. But there is nothing new in this; we have to do it now.

For a well-trained key punch operator it will be possible to punch up to 18.000 characters an hour. This means that an average book which has about 300.000 characters, will be punched in three days. The punching operation can be done locally. Key punch machines can be installed in the production centre and key punch operators employed. But this is not necessary, because you can also use a key punching service bureau. This is an office where you can deliver your material, the office will punch your material for you - and of course send you a bill. So if, for a short period, the punching capacity in the production centre is not sufficient to meet the demand, assistance can be obtained from a commercial key punching service bureau. There will therefore be no problem in obtaining enough key punch operators, as the operation can be done outside the centre if necessary.

When the book has been transferred, we havein fact, a complete book in punch cards which contains exactly the same information as the inkprint book. The only difference here is that now the book can be read by a computer. We say that the book is now in a machine-readable form.

After the book has been transferred to punch cards we have to translate all the words in the book to braille using the rules. This is done on a big computer in which we have put a special translation programme. This translation programme contains some dictionaries and information about the braille rules. The translation programme is made in a high level language, FORTRAN IV, and is, as you might say, a more or less table-driven programme. I will explain that a little. I said that we put a dictionary into the programme giving the rules for making the translation. What the programme actually does is this: each time a word has to be translated, the programme looks through the dictionary to see if the word is there. If it is there, we just use this word as a whole-word contraction. If it is not there, we then go further on in the dictionary to find possible part word contractions, and the programme will then, by the use of special codes in this dictionary, find outwhether the contraction can be used in this position in the word. Since it is table-driven with the dictionaries it is of course possible to insert new dictionaries, so that not only Danish language can be translated, but also other languages.

The translation programme reads the punch cards and translates word by word the inkprint to contracted braille. The contracted braille is now transferred in the form of code to a magnetic tape. The speed of the translation, as far as we know now, is more than four thousand words a minute, depending of course on the computer. An average book can be translated to contracted braille in less than fifteen minutes.

Of course, now comes the question - what is the braille like? Is it correct? Is it perfect? How many errors will occur in the braille? With a prototype we have proved that, without doing very much to the system, it is possible to reduce the number of errors to less than four per thousand words. We hope in the final system to have less than one error per thousand words in a book. When talking of errors, this does not mean that the book is unreadable when the error occurs, but that a contraction has been used in a position that is not correct according to the given braille rules. It will be readable, but maybe you will hesitate a little when you see this word. Another important thing is that the same error will occur throughout the book. If a translation programme makes an error in one word, the same error will occur every time we find that word. A computer like this is very consistent.

I mentioned in the beginning that the translation programme is written in a high level language. This means that the programme can be run on almost any computer, since all big computers have a FORTRAN compiler. The running of the translation can be changed from one computer to another, or a third computer. This again means that we do not need to make a hard contract with one firm for the translation but can change from one company to another in order to get the best price and the best service for the translation.

The production centre will not have this big computer since the price of such a computer is too high, and as you can see, we would not use it the whole day. We shall buy the necessary computer time from the big service bureaus. Here again, it is important that we can change from one service bureau to another.

When the translation is completed, we have a magnetic tape on which we have written the braille codes for this book. We now move this magnetic tape to the actual production centre, maybe we should call it the copying centre, because our master of the book is now on the magnetic tape.

In the production centre (the copying centre) we will have the following machines installed:

1. a tape recorder, so that we can read the magnetic tape
2. A controller which can control the process of reading and copying,
3. An output device, a machine for printing the braille codes on paper.

In the set-up at the copying centre we have been very careful to use equipment that is available from big suppliers. We do not believe in the home production of one single machine which can handle this special operation, because maintenance and repairs are, in our opinion, so important to a copying centre that we prefer to buy the necessary equipment from big suppliers - which has been possible in this situation. A magnetic tape unit for reading the magnetic tape can be bought from almost any supplier of computer machines. The controller is in this case a mini-computer, and as you may know there are big suppliers of mini-computers. The actual printing mechanism is a line printer produced by IBM. We have more or less based the copying on this line printer.

When we want to make a book in braille, we mount the magnetic tape on the tape recorder. We put a little programme into the mini-computer which handles page format and hyphenation. By the way, I think that this programme is the first to handle hyphenation in automatic printing. We mount the book on the magnetic tape unit. We put the page format into the book and we then insert paper into the line printer. Now we start up the mini-computer, and the line printer will now print what is on the magnetic tape page for page.

The printing speed is four hundred braille lines per minute. This is equal to about twenty braille pages per minute. For an average book the printing process will take no more than fifteen minutes. This is only one-page print, - it is not printed on both sides of the page. This is something that we have had to accept in this system. However, we think it will be possible to use thinner paper than is used now. Also, we do not propose to set up a library system for the books. Each time a blind person wants a book, we just print the book and send it to this person who may keep it for good. We do not wish to have a library system. Another thing I would like to mention, is that we have found it possible to get computer printing paper which, when the printing is completed, can be just trimmed at the edges and put into a folder. This simple form for binding removes the need for conventional binding.

You may ask why we use a mini-computer for reading and printing. One of the reasons for this is that different devices can be connected to a mini-computer. This is one of its advantages, and people who know a little about mini-computers will agree with me that when you want to hook another device or machine to a mini-computer, this is more or less a question of producing an interphase and making some simple equipment for the controller. This means that when we have set up this production centre, it will be possible to install new devices as they come out, and connect them to the mini-computer, so that the computer instead of printing on the line printer can print on, for instance, an automatic stereographing machine.

The three processes I have just described comprise the modern braille system which we are now going to develop. The machines will be available within eight months and we plan to have the whole thing running before October 1st.

We hope to develop this system more and more in years to come. First of all, we should like at a later date to be able to read the books optically, that is to say that instead of doing the key punching, we just put the book into a machine which will read all the pages and transfer them to punch card or magnetic tape. We also hope eventually to be able to make a mathematic dictionary and maybe a chemistry dictionary, so that translation of mathematics and chemistry will be possible, although we realise that there are big problems there. Later on we also hope to be able to set up an "on line access" system, so that schools for the blind, using a fairly simple braille device, can call the production centre and automatically get braille sent through telephone lines to the school.

I think this gives you a description of how a system can be made, and how we will do it in Denmark.

Possibilities and advantages of international co-operation in the field of literature in braille and on tape -
Ideas and suggestions for practical agreements of common interest.

General Aramis Ammannato (Italy).

In beginning the discussion on the subject assigned to Italy, I should like to express my deep satisfaction in the fact that we have succeeded in organizing this Convention, a highly positive sign in itself.

Apart from the results it may bring, I think we should emphasize the significance of the meeting itself. It is the result of the ERC's desire to promote a discussion which, based on sound theory, will lead the nations of europe towards the technical and practical collaboration needed by the blind of Europe.

We must record our thanks to the President, Mr. Jensen, and the Secretary Dr. Pielasch, whose intelligent and efficient work has translated into fact the firm wishes expressed by all members of the Committee during the course of the sitting in Berlin GDR in May 1972. Personally, I would like to say that I have done everything possible - both as a member of the ERC and as President of the Braille Commission - to promote this new phase, which I should call the "phase of direct contacts". It is in the capacity of President of the Braille Commission that I should like to thank the members of the Commission who have offered such cordial and sincere collaboration, and with whom, during the meeting of 1st and 2nd December in Monza, we prepared the material upon which we are now working. I should also like to record my thanks to the Norwegian National Association of the Blind, and especially their General Secretary, Mr. Husveg, for their excellent hospitality and for the perfect organization of the exhibition.

Having made these brief, necessary observations, we may now begin discussion of the subject in question.

If we accept the concept that braille constitutes today - and as far as we know will constitute tomorrow - the most efficient means of access to education, professional training and active participation in society for the blind person, then we see that the braille book - though expensive and bulky - is a precious and irreplaceable instrument. As such it is worthy of our attention.

We Italians believe there are two possibilities for international co-operation in the field of braille: economic and cultural.

Let us examine the problem from the beginning, that is, prior to the actual production of the book. We can leave the discussion of the technical means of book production to others and instead discuss the raw materials required: paper, thermoplastic material and metal for moulds.

We all know that the special paper suitable for taking braille print and retaining the relief for a long period, is very expensive. From information received it appears that many countries have difficulties in obtaining supplies of this paper, and they are dissatisfied with the quality

and high cost. Although this information requires further investigation, it can be accepted as a guide.

It is quite clear that no individual national paper industry is really interested in producing this special type of paper, because the requirements of each country alone are not sufficient to make it profitable. The manufacturers who do produce this paper are not particular about its quality. Taking this into account, it was proposed during the first working session of the Braille Commission, that a European Centre for the supply and sale of braille paper be set up. This idea was subsequently formulated and published in the final document, which was unanimously approved.

If this idea can be realised, it will have many obvious advantages. If the requirements of many countries, or the whole of Europe, could be ordered in bulk from one paper manufacturer, the producer would have a commercially interesting proposition before him, and could guarantee the quality of the product at the most favourable price. The manufacturer chosen would of course have to be conveniently placed geographically. The higher transport costs which some countries would have to face would be largely offset by the better quality and reduced cost of the product.

Closely connected with the realization of the European Braille Paper Centre, is the standardization of the format for our books and periodicals. This is a subject for the technicians to discuss more fully, but I must make this point: The economic advantages derived from mass orders to one paper producer, would be greatly reduced if the orders were divided into too many different formats. We all know that uniformity of production is a fundamental condition for reduction of costs. We must, therefore, reach agreement on standardization of format. The number of formats should not exceed two, and these should preferably be in a ratio of two to one. It will be up to the technicians to select the optimum dimensions taking into consideration the existing printing machines.

What I have said about paper is equally valid for the other materials employed in the production of braille books: metal for moulds, thermoplastic material for Thermoform production. We could create a European centre for these too.

If we are going to be realistic, we must note that some countries could not benefit from these arrangements, owing to exchange difficulties. The international situation also affects commercial exchanges, but fortunately it does show many, promising signs of improvement.

Let us now go on to the possibilities of co-operation from a strictly cultural angle: a viewpoint implying economic considerations which cannot be ignored.

Obviously each nation has its own vital needs connected with the production of braille books, tied to language, education, culture and the social-economic level of its people. In this type of production of an essentially national character, the only form of co-operation is a totally free exchange of literature. This can take the form of free loans, and the sale and mututual exchange of volumes, either between public bodies or private individuals. This form of co-operation exists already, but I think its extension should be recommended.

It would be desirable to stop the publication in contracted braille of our national literary classics - writers such as Dante, Goethe, Shakespeare, Racine, Pushkin and so on. This should be done for the benefit of the ever-growing number of foreign language students, upon whom we should not impose the additional handicap of learning from abbreviated braille.

I turn now to a few sections of braille publication which by virtue of their universal character, offer possibilities for co-operation and allow the preparation of an integrated plan of work. I am referring to the classical languages of Greek and Latin, to Esperanto, and to a certain extent to music.

The works of Homer, Plato, Cicero and Virgil in the original language, are equally understandable in all countries where these languages are studied. It would be most useful if the production of this specialized type of book - which is a very onerous task indeed - were not undertaken by each individual country. In other words, if you produce the Odyssey and I the Iliad, we can then exchange copies of these two texts so that both our organizations will have copies of both Homeric poems sooner and at a lower cost.

We can see from this simple example how profitable it would be for our respective libraries, if each country were to accept work in this field integrated with the activities of the others. The launching of an intelligently agreed programme could place at the disposal of blind students in Europe a number of Greek and Latin works greatly superior to those available hitherto. Such a programme would have a high cultural importance and very notable economic advantages, and would present no difficulties that could not be overcome immediately by the good will and determination of all concerned.

As far as music works published prior to the beginning of this century are concerned, I think you will agree that each country should retain its own system, in accordance with its national school of music. There is, however, still the possibility of working out an integrated programme of the musical works of our own century. There is a dearth of material in braille in this field.

We must now turn our attention to the "talking book" and its methods of production. The talking book is not a substitute for braille, but a complement to it.

We cannot say that the production of books on spools of "open tape" is out-moded; no doubt this method will be in use for some time, since it guarantees undoubted technical efficiency in the field of high fidelity with which cassettes cannot complete. However, there is no doubt that cassettes have conquered the market; they have achieved great popularity and offer - especially for the blind - advantages which cannot be ignored. Here are a few of these advantages:

1. The great ease with which the cassette can be inserted in the recorder or player,
2. The certainty - or relative certainty - that the tape cannot twist or jam, thereby damaging the playing head of the machine,
3. The smaller size of both cassette and recorder which make them easily transportable.

It should be pointed out that anyone who wants to listen can avail himself of the cassette players which are now on the market, and which present notable advantages.

A very important advantage is the fact that, since the player is designed only for listening, not even the clumsiest and most inexperienced "reader" can "wipe the tape clean" of the recorded book. Cassette players are on sale everywhere at very economic prices - in Italy the Japanese firm Sony markets one costing 13.000 lire, and Philips one at 15.000 lire. Finally, they are very light, small and easy to carry about.

At this point we must compare the type of cassette produced in England for the use of the blind with cassettes in everyday use, BASF cassettes and so on. The English system requires a special cassette player produced in England. It is larger, and, we maintain, more expensive. Since it is not available on all markets, maintenance and repairs in case of breakdown are a problem, since it is difficult to find a mechanic capable of making the necessary adjustment. At the moment we do not know whether this apparatus can be run both from batteries and from mains electricity. It would appear that it can only be run from the mains, which would limit its use and thereby reduce its usefulness - for example, it could not be used in the open air. Most of the players on the market, however, may be used either with a battery or mains supply. It is true that the English type of player allows recordings to be made on several tracks and therefore gives a greater number of listening hours (13 unless we are mistaken). This is convenient when dealing with lengthy works requiring hours and hours of reading, but is not very efficient for short books. In fact, it would be necessary to record different works on the same cassette, since it is uneconomic to leave the tape blank. The reader may then be forced to hear unwanted texts which are combined with those which interest him.

Those who have experimented with this apparatus have also noticed a background hum which tires the listener in the long run, and renders the reading less pleasant and relaxing. In its favour, we may say that the English cassette can be forwarded easily through the post, but as we have seen, this would appear to be the only point in its favour.

Turning our attention to duplicating equipment, it would appear that equipment for recording onto BASF cassettes is available in Denmark which allows high speed reproduction of series of ten cassettes at a time. We have asked for information and prices of this equipment. Also in favour of the ordinary cassette is the irrefutable fact that since it is in popular use and the corresponding players easily and cheaply available to everyone, there is always a mechanic available to effect the necessary repairs. So the blind person can use his recorder with confidence, and the recording centres can proceed without fear of their work being interrupted - perhaps for a long time - while they contact the "specialist" capable of undertaking the repairs. To be quite honest we must admit that even cassettes - we speak from experience - often let the tape "unhook" from its fixing point, either while recording or listening. Recordings must therefore be made on BASF cassettes which can be repaired; many cassettes are welded and cannot be repaired but must be thrown away.

To conclude, it must be said that since the cassette recordings are at 4.75, if not less, and given that the cassette recorders give minimum returns, it is obvious that the fidelity of the reproduction is reduced.

While the sound reproduction is satisfactory enough for study purposes, essays or magazines, when used for books and light reading in general, the reduced quality might impair the listener's interest, especially in the case of long books which mean recordings of long duration.

In preparing the draft of this communication in co-operation with my country's experts, I have sought to follow two directives: firstly, to seek inspiration from the suggestions and arguments which emerged during the course of the work of the Braille Commission, which represent a wide and qualified section of ideas: secondly, to propose the pursuit of realistic goals which are within our reach today, or at the most, in the immediate future. Now it rests with this highly qualified assembly, which has listened so kindly and patiently to me, to judge whether my aim has been achieved.

I do not indulge in easy optimism, but I am convinced that this is a time for action. I am sure that our work will not disappoint the hopes and expectations of the thousands of blind people whom we represent. They do not expect miracles, but they do, quite rightly, expect concrete proof of goodwill and determination.

The numerous occasions on which our national associations have proved themselves immune to the germs of discrimination and narrow-minded nationalism - something of which we may be justly proud - permits me to close my speech on a key note of faith and hope. There are always difficulties, but they will not stop us if our efforts are wisely co-ordinated.

S-152/1973.

The importance of special periodicals in braille and on tape

A paper submitted for presentation to the European Braille Conference, Oslo, September 1973, by Donald Bell, Director of Publications, Royal National Institute for the Blind, London, England.

The importance of having as much material as possible in braille and on tape seems to me to be so self-evident that I must confess myself rather at a loss to understand the particular significance of the subject allocated to me. And it seems to me that the amount of material actually available in these media for blind people is, relative to print, so tiny that almost anything may be considered "special". If I have not grasped the intent of the topic, please forgive me, but in any case I think it may be useful if I give you some idea of how we deal at the Royal National Institute for the Blind with the problem of providing periodical material, with some reference to what is being done elsewhere in the United Kingdom.

First, however, some facts and figures to give perspective: in the British Isles there are published 127 daily newspapers, 15 Sunday papers, 1,174 other newspapers, 4,431 periodicals and magazines, and 1,561 annual publications of all types. I am not suggesting, of course, that any one person would need to have access to more than a very small percentage indeed of these publications, but demonstrating rather the impossibility of providing in braille or on tape any sort of equality of access to the range of material available to those of us with sight. The blind population of the UK is 116,000, a figure which includes all kinds and varieties of people (although it must be said that 71% of these are over the age of 65). But since, in terms of interests, we are catering for a fair cross-section of the whole population, we cannot quantify needs : many blind people, like many sighted, read virtually nothing, but one blind university teacher needs to have access to as wide a range of material as his sighted colleagues. In other words, the whole range of printed matter ought to be available to blind people : we should not assume that blind people fall into a special class which has special reading needs.

But we have to be realistic and accept that we must cut our coat according to our cloth. What in fact we can provide must be governed entirely by the production resources at our disposal. In the United Kingdom, we have two braille publishing houses, printers of braille who can produce material in multiple copies (since I am here concerned with periodicals and not book production, I shall not take into account the ways and means we have of producing braille books). These are the Royal National Institute for the Blind, the second largest publisher of English braille, and the Scottish Braille Press at Edinburgh. Each of us publishes a number of periodicals. But each of

us has heavy commitments, of course, in book production, which limits our capacity for periodicals (even so, well over half of the RNIB's transcribing and printing resources are spent on periodicals.

The types of periodicals we publish today are conditioned to some extent by historical circumstances, in the sense that some were established many years ago to meet needs which still exist. Others have come into existence to meet later needs. But all, of course, have changed their character with the years to reflect the contemporary scene. All except one are produced in the embossed types, and here I had better remind you that in the UK we employ, besides braille, the Moon system of embossed print. This is quite as old as braille, and was in fact in general use in the UK before braille. It was devised by a blind man called William Moon and is based on modified forms of the roman alphabet. Its main disadvantage is that it is a one-way system, ie it cannot be written, and it is also much bulkier than braille. But its great advantage is that it can be used for reading by many elderly people who cannot master braille. We produce books in Moon as well as periodicals. (Remember that 71% of our blind people are over the age of 65, and most of these lose their sight late in life when they have neither the ability nor the inclination to learn braille. Let me add also in this parenthesis that we estimate our braille readers to be about 20% of the blind population, although the majority of these use the system at a minimal level for basic needs and are by no means fluent readers.)

The periodicals we publish fall into two main categories, newspapers and magazines, the former published bi-weekly and weekly, the latter monthly or at more extended intervals. All, as I have claimed earlier are to a greater or lesser extent 'special'.

I will mention first the paper with the largestcirculation (about 5,300), the Braille Radio Times. This is a summary of BBC sound and television programmes, and began publication in 1927 shortly after the beginning of sound broadcasting in the UK when it quickly became apparent that the radio was to play a very important part in the lives of blind people (at about the same time, the British Wireless for the Blind Fund was established to ensure that no blind person was without a radio set). The Braille Radio Times is now issued free, since we took the view several years ago that it fell into the same category as radio sets and radio licences, for neither of which a blind person has to pay. The braille paper is a bare skeleton of the letterpress edition from which we work. The reason is significant in that it underlines the difficulty of producing for blind people any paper for which the time factor is crucial : the "copy" reaches us by special messenger at the earliest possible moment every Thursday morning, and we have Thursday, Friday, Monday and Tuesday to edit, transcribe, proof-read, print, collate and despatch if the paper is to reach readers in good time for the beginning of the week's programmes on Saturday. We use in parallel two transcribers and two printing presses for the Braille Radio Times and all production operations overlap, but even so we have time only for the very decimated version I have mentioned. When people ask us for the Independent Television programmes (there are more than a dozen networks) or programmes for the 20 BBC local radio stations now operating, we have to say that the time factor makes them impossible.

As I have mentioned cost, it may be as well at this atage to tell you of our pricing policy. With the exception of the Braille Radio Times and a few other papers which are free, we charge subscribers only the cost of the paper used, ie the more the number of pages, the bigger the subscription. This means, of course, that all our periodicals are heavily subsidised from our voluntary funds. In fact, with commodity prices constantly rising, and with our subscription rates reviewed rarely, we don't nowadays even cover the cost of the paper we use.

The Braille News Summary is a weekly digest of world news designed for deaf-blind people, ie those for whom the radio is no help in keeping in touch. Again, the time factor is crucial. It is compiled from the week's national newspapersevery Monday and goes out to readers on Friday. Thus, it is possible that subscribers may be reading some news which is almost a fortnight old. The News Summary is also free, since we consider it to be a substitute for the radio news, and has a Moon edition (which is somewhat shorter - again, the time factor, for Moon takes longer to produce than braille). The braille edition runs to 3,900 words, and it is, as you can imagine, a nice editorial feat to compress the week's news within this compass, maintaining a good perspective and balance.

I have mentioned the radio, and this, of course, has a direct bearing on periodical production. The radio and television services provided in the UK, we feel, are so comprehensive in their coverage of news, current affairs, the arts, entertainment, most things in fact of interest to both majorities and minorities, that periodicals for blind people can concentrate on special fields.

The other newspaper-type periodical we publish is the National Braille Mail, which comes out twice a week. This is a collection of leaders, or editorials, from the national dailies and weeklies, on current affairs. Editorially, we have the problem of maintaining a balance, since most editorial comment is to a greater or lesser degree political. This paper, we feel, is useful since it enables readers to follow in greater depth and at their leisure topics which are perhaps more cursorily treated by the radio. Even here, the BBC has a programme which summarises the editorial comment of the day's papers. We, incidentally, do not summarise, preferring to give our selections in toto, which is one of the advantages of the paper.

I have spent some time on the weeklies, since they seem to me to illustrate best the thinking behind our periodical publication policy, and I shall now deal more briefly with the monthlies, bi-monthlies, quarterlies and annuals, the very titles of most of which indicate their function and place in the scheme of things.

The Braille Digest is a selection of "middlebrow" material from a variety of letterpress periodicals. It is not really a "digest" in that, again, we reprint in full, taking the line that an article must be judged as a whole and not abbreviated according to the whims of the editor. Perhaps at this point I ought to make it clear that, over our periodical field as a whole, our policy is to give blind

readers as fair a sample as we can (and it can be only a sample) of what is available in print. In only a few instances does "blind welfare" as such come into the picture. We take the view that our readers prefer to be outward-looking, integrated into the community as far as possible, rather than inward-looking, interested mainly in things to do with their blindness.

As I have said, most of our periodicals are specialist in the narrowest sense of the term, in that they cater for professional and special-interest groups, minorities within a minority, one might say. For blind physiotherapists we have the monthly "Braille Journal of Physiotherapy (which contains articles from the appropriate letterpress periodical, Physiotherapy) and the Physiotherapists' Quarterly, which draws on articles from professional letterpress journals on current medical and surgical topics of interest to blind physiotherapists. The Braille Musical Magazine (established, incidentally, in 1910) contains articles and information from current musical periodicals and some original material for both the professional musician and the amateur music-lover. It also contains reviews of new braille music publications.

Among other professional groups catered for are ministers of the church: the quarterly Theological Times runs articles and reviews from theological periodicals representing many aspects of churchmanship, ie many denominations. There is the Piano-Tuners' Quarterly, with trade news, articles from the trade journals and correspondence. Extracts from "Law Notes" is, as its name implies, a selection from the professional letterpress monthly and provides blind solicitors with cases of the month and details of new legislation.

The sole letterpress periodical of the RNIB is one with which I hope most of you are familiar, the New Beacon, the monthly journal of blind welfare and the only one of our periodicals which concerns itself exclusively with the field of blind welfare. As such, it contains "original" material and is not a "scissors-and-paste" job, as all our other periodicals are for the most part. It is aimed at all who work, either professionally or voluntarily, or who have a peripheral interest, in blind welfare. It is our one periodical which is not designed primarily for blind people, although it has a braille edition. It was established (under a different name) over 70 years ago (the braille edition was started about 20 years ago).

Our oldest braille magazine, Progress, a monthly, began publication in 1881. I suppose this is the least "special" of all. It contains articles of general interest taken from current letterpress magazines, but has its own special sort of contact with readers in that it runs correspondence, "pen-pal" requests, an "exchange and mart" section and competitions. It also accepts some original work. In contrast, the Portland Magazine, another monthly, is our "highbrow" periodical, containing as it does articles, stories and poems from the more academic and "literary" letterpress weeklies, monthlies and quarterlies. It perhaps illustrates best the impossibility of our task in providing blind people with anything like the equivalent of what is in print. It runs to some 19,000 words, or what may be the length of a single article in some of the letterpress periodicals from which we draw our material. These range from weeklies such as the New Statesman,

Listener, New Society, Spectator, Sunday Times, Observer, to monthlies and quarterlies like the London Magazine, Encounter, Twentieth Century, Transatlantic Review. When I consider that last month we were unable to include an article of 10,000 words I thought would be of particular interest to most readers, one of many in the week's Listener, it is brought home to me very forcibly that in the field of periodicals we can only scratch the surface.

We publish four periodicals for children. Fleur-de-Lys and Trefoil Trail are monthlies, both free, for Scouts and Guides. School Magazine, also monthly, caters for an age range of about 9-15. Roundabout, quarterly, is for younger children.

"Special-interest" periodicals include the quarterly Braille Chess Magazine and Tape Record, a monthly for tape-recording and hi-fi enthusiasts (incidentally, the latest in our periodical range, and catering for what is a growing interest). Both of these, like most of the others, draw almost entirely from material already published in letterpress.

I said earlier that the types of periodicals we publish today were conditioned to some extent by historical circumstances. I had particularly in mind what, for want of a better term, I refer to as the "religious" magazines. In its early years, over a hundred years ago, the British and Foreign Blind Association (as the RNIB was then called) like most of the voluntary organizations for the blind of the time, had rather an evangelistic tendency (the first book to be put into braille was, of course, the Bible), and "religious" magazines have always been published by the Institute. Today, we publish two of our own, both bi-monthly, and also two more for outside organizations.

One very important monthly I have not yet mentioned is Braille Monthly Announcements. This has our second-largest circulation, over 4,000 (it is free) and its function is to keep braille readers informed of all new books for sale or loan (RNIB, Scottish Braille Press, RNIB Students' Library, National Library for the Blind, Moon, Talking Books) and new apparatus.

We also publish a few periodicals for outside organizations which may be classified as "house magazines". At this point I think I should say too that, in addition to the Moon Newspaper (the equivalent to the Braille News Summary I have already mentioned) we publish five other periodicals in this medium, two "general" ones, one for women and one for gardeners.

I have mentioned the two largest circulations. The others range from 1,440 down to 70 (Extracts from "Law Notes"). Most of the other professional and special-interest periodicals have circulations of three figures.

The Scottish Braille Press, which has until recently been primarily a periodical-publishing house, produces 11 magazines of its own and over 30 for private organizations. The former complement the RNIB's lists, and include magazines dealing with sport, science, current affairs, women's interests and the interests of teenagers and young people. The latter are nearly all "house magazines" of one sort and another.

Since annuals are really periodicals, perhaps I had better mention before I finish with braille that the RNIB publishes several each year towards the end of the year. These include a Christman annual, a scripture text calendar, an almanac, a children's braille annual, Bible readings for the year and a lectionary (for ministers of the church).

One last word on braille. As you probably know, we have for some years been employing a computer to produce automatically-transcribed braille. In recent months we have been redesigning this automatic complex with a considerable expansion of braille production in mind. At present we use the computer for transcribing some books and a few magazines. With the gradual build-up of production possible as a result of the redesigning, we hope to be able to transfer most of our periodicals to automatic production (our computer programme cannot yet deal with the more complex material) and to increase our range of periodical material. We shall be expanding the size of some magazines, and introducing new ones (one of the first of these, incidentally, will probably be a magazine for blind computer programmers).

I have been dealing so far with the embossed types, since taped material plays no part in the Institute's periodical programme. Before I explain the reason for this, I must hasten to add that our activity in the tape field is pretty wide-ranging and on a substantial scale. The British Talking Book Service for the Blind, which is administered by the RNIB in co-operation with St Dunstan's (our organization for the war-blinded), was established in the mid-thirties and now has a membership of over 36,000. Less than 5% of this membership reads braille (I refer again to the fact that 71% of blind people in the United Kingdom are over the age of 65). The average age of Talking Book readers is in the 70s. We record in our own studios, using professional readers, some 250 titles a year, and, in addition, have recorded by volunteers at home some 450 titles a year for the student section of the library. As most of you know, I expect, the equipment we use (playback machine and cassette) has been developed and made especially for us, and is designed to be used easily by elderly blind people for whom the operation of a commercially-available tape-recorder would, as we know from experience, present great problems. The equipment also has the advantage that it helps to protect copyright, since our tape cassettes cannot be played on any other kind of machine.

Why does the Institute not use this extensive base to launch a periodical programme on tape, especially since the great majority of blind people in the UK cannot read the embossed types ? Although we have had the possibility under review for many years, and although we do produce a tape on a very limited scale for computer programmers, the short answer is that membership has been expanding so rapidly since we started recording on tape (from 5,000 in 1961) that all our resources have been required to maintain this momentum in the book field, to which we give priority. Taking a longer view, we have many problems to solve before we can inaugurate a programme of periodicals within the Talking Book system. Basically, the sheer extent of our operation militates against us, for this is a situation in which working on a smaller scale would give better results. With a membership of present

size (which is still expanding constantly), we should need copying facilities capable of giving us thousands of copies of periodicals. This capacity we cannot at present provide without detriment to our current programme, particularly the student side, to which we attach high priority. Another problem is one I have touched on in respect of braille, the time factor. Operating on the scale necessary with our membership, we feel that weeklies would be out of the question: studio reading time, added to dubbing and copying time, added to despatch time, would make any weekly out-of-date by the time it reached members. What we aim at, eventually, are therefore monthlies. But these are not the only problems: we have to consider the economics too. Our present cassette tape has a capacity of 12 hours' reading. Periodicals with a shorter reading time would therefore tie up a great amount of wasted tape. Further, we have the problem of turn-around: in order to operate efficiently, we should require prompt return of periodical cassettes in order to proceed with subsequent issues. With several periodicals in production in runs of thousands, one can imagine the potential waste here.

Having explained why our Talking Book Service has not so far really entered the periodical field, I ought to emphasize that we do have taped periodicals in the UK. For many years we have had voluntary groups producing tapes for blind people for use on commercially available tape-recorders. These are, inevitably, on a small scale and include recordings of original material (most of minimal value, I think, in view of what I have said about the coverage of radio and television in the UK, and in view of what is available commercially on tapes and records) and of published material (including our own New Beacon). One particularly valuable service is of tapes for chess enthusiasts. A recent development has been the spread of local "talking newspapers". Again on a voluntary basis, usually in co-operation with the local paper, these provide local news for many blind people without access to local radio stations.

I realise that in this short paper I have left many questions unanswered, but I hope that it may stimulate the discussion and exchange of information which is so valuable in our field and which it is the purpose of this conference to stimulate.

The Blind Person as reader, listener and buyer of literature - an international survey.

Dobroslaw Spychalski, Poland.

Braille and tape-recorded literature has become available in great quantity for blind people in Europe. This relatively satisfactory situation is due to many years of strenuous effort by libraries, organizations and agencies of and for the blind. In addition more occupations have become accessible to blind people, thus promoting the demand for books for general and higher education, upgrading and entertainment. This, no doubt, is another sociological phenomenon which has added to the increase in the number of readers and listeners since 1945. To many blind individuals books have become indispensable.

This report is based mainly on the figures of an inquiry organized by the Presidium of the European Regional Committee on the activities of printing shops and libraries for the blind. The results of this inquiry have been evaluated for this paper by courtesy of the Secretariate of the European Regional Committee. The following European countries have contributed information in response to this inquiry: Austria, Denmark, Finland, FRG, GDR, Hungary, Ireland, Italy, Jugoslavia, Luxemourg, the Netherlands, Poland, Roumania, Spain, UK and USSR.

Let us deal with some of the aspects relating to the blind reader. The figures stated for Braille readers vary between five and fifteen per cent. However, national statistics so far are quite unsuitable for generalisation or comparison because of different criteria. For example, there exists no general definition of blindness. Criteria by which a person is declared blind differ between 1/10 and 1/60 vision from country to country. Registration is quite an appreciable problem, since many blind individuals are not even known to their respective organizations of and for the blind. Some countries have reported that their number of readers has decreased in recent years, for example, to the extent of ten per cent in the FRG and GDR. Similar decline has been reported by the USSR and Poland. We are inclined to assume that such reduction in the number of readers is widespread and caused by the introduction of the talking book. Nevertheless, the organizations of and for the blind cannot accept such a reduction in reader figures, since Braille remains the main tool by which a blind person can secure his intellectual and cultural independence. The example of Sweden may demonstrate what can be achieved in this context by methodical efforts. There, the number of readers increased by 25 per cent as a result of continuous rehabilitation courses organised for the blind.

Let us now try to find out how far sociological changes relevant to the blind community are reflected in library stocks and printing programmes. A sizeable part of the new demands is met by periodicals of which an increased number has been published in recent years. Austria, Denmark, Finland, Ireland and the Netherlands reported increased percentages of schoolbooks in their total production. Science literature and materials for courses are also printed in larger quantities, appropriate examples being cited by Finland, the GDR, Hungary, the Netherlands, Poland and the USSR. In addition, the USSR reporting on the percentage of college literature, pointed out special rates of increase in the field of mathematics, computer programming and production economy.

Many libraries are known for the great efforts they make to meet individual requests made by students and persons in employment. Some of these libraries report high percentages of individual transcriptions and the trend is on the rise.

There are more listeners than readers. In Denmark, two thirds of all registered blind individuals have subscribed to talkingbook libraries, and comparable figures are inexcess of one third in most of the other countries.

For the time being, fiction is still foremost in the programmes of talking-book libraries, percentages being 80 in Austria and Hungary, 75 in the USSR and 70 in Poland. Many topical demands are met by talking periodicals. Considerable numbers can be noted for school books and scientific literature, namely more than 40 per cent in Finland and Sweden, 35 per cent in the Netherlands, and 30 per cent in Poland. While it seems difficult to make a definite statement on the basis of the data available, one observes a rising trend in the production of non-fiction literature. This point has been stressed by several countries.

Informative conclusions may also be drawn from the inquiry regarding tape recorders. Recorders specially designed for blind users are available in Finland, Ireland, Spain and in the United Kingdom. Maximum playback time of a cassette is 12.5 hours.

In other countries, preference is still given to open reel tapes, for example, in the FRG, GDR, Italy, Jugoslavia, Luxemburg, the Netherlands, Roumania and the USSR. The point has been made that by using commercial recorders more advantage may be taken of the general market, and the dependence on one particular supplier may be avoided. Developments in tape recording had also their impact on the field of blind welfare. The new compact-cassette has been introduced inthe FRG, GDR and the Netherlands, and will be used exclusively in Sweden, from 1974. A similar decision has been taken in Denmark, but no deadline has been fixed as yet for general introduction.

What role does the blind person play as buyer of literature ? Generally all organizations of and for the blind, agencies, and libraries for the blind, are making great efforts to keep prices as low as possible. In a number of countries, including Austria, Ireland, Jugoslavia, the Netherlands and Roumania, books are even sold at production cost. Books printed in Britain are sold outside the country at production cost. Discounts are granted in other countries, for example, 20 per cent in Italy. Braille books are sold at ink-print retail prices in the GDR, Hungary, and USSR. The same principle has been adopted in Denmark and Poland for unbound books, with covers being charged separately. Other countries grant 90 percent discount relative to production cost, and consequently sell Braille books at inkprint retail prices. This is done in Britain, Finland and Spain.

The inquiry organized by the European Regional Committee has painted an impressive picture of the great variety of effort made by the printing shops and libraries for the blind. We are fully convinced that the European Conference in Oslo will provide a further impetus in making Braille literature and talking books more readily available and ensuring that in future these books will be more topical and cheaper. Our special books are efficient means of securing more intellectual and cultural independence and increasing integration for all blind individuals.

Future developments in the international exchange of reading and sound materials

Books have made a deep impact upon human life for many centuries. They have enabled man to share in the thoughts of the nations' great teachers, and, though not possessing a voice, have become ever ready teachers. They have increasingly assumed the role of a key by which to elucidate the laws of society and of an indispensable aid to vocational training and upgrading.

In the past blind people were unable to enjoy this treasure. Only towards the end of the last century, when the script invented by Louis Braille had definitely made its way to the fore, was the blind person given access to literature. Through braille, the printed letter was given meaning for blind children and adults, and through books they were given a real chance to acquire knowledge and education equal to that enjoyed by sighted people.

Special libraries for the blind began to appear in almost all European countries about the turn of this century. Today, their importance is equal to that of libraries for sighted readers.

Deutsche Zentralbücherei für Blinde was opened in Leipzig in 1894, as the first public library for the blind in the German-language area. There had been earlier libraries in institutions for the blind, but these had been available only to inmates.

First of all, I should like to make some comments on Deutsche Zentralbücherei für Blinde zu Leipzig. Their book stock was entirely destroyed during World War Two, and so in 1946 we had to start from scratch to rebuild this important institution. However, thanks to generous government support, smooth progress was made and the library now has 120 full time employees. Deutsche Zentralbücherei für Blinde zu Leipzig is engaged in printing, sale and lending of literature and music in braille and on tape. It also publishes large-print literature for older people with impaired vision or diminished visual acuity.

Some figures may help to illustrate developments: today 21.600 volumes of 6,500 braille titles plus 71,000 tape-recorded hours of 3,000 titles are available from the library.

While international lending is no doubt of the greatest importance to all of us, I must confine myself mainly to our own experience, since libraries for the blind are primarily national. The explosive development of science and technology has greatly increased the international importance of braille libraries. This was clearly understood and appreciated at the International Symposium on Aspects relating to the Rehabilitation of Blind People with Higher and College Education that took place in Berlin in 1972. Year by year a growing number of blind people enter specialised professions. Let me mention just one of the recently opened potential careers for a blind person,

namely that of a programmer in electronic data processing. Employment of blind programmers in certain countries has entailed new tasks for the special libraries there, as translating the necessary specialised literature involves sizeable problems and tedious work. I mention just one example, that is the preparation of intricate diagrams, tables and topographic representations, for which new symbols had to be developed.

This is one more reason for us to give attention to international standardization of special notations, and I have in mind, first of all, mathematical notations. The libraries for the blind should use all their means and potentials with a view to rendering effective aid to all blind people engaged in business, administration and science. The aim should not only be to secure their livelihood,but to enable them to carry out their vocational duties as far as possible independently of sighted colleagues. Specialised literature is a necessity in this context, and quite often it will be advantageous to use books stored by special libraries in other places. Let us look at the needs of students of Germanic, Slav, African and Roman languages. They must read literature relating to their specific studies in addition to reading books in their own language. It should be borne in mind that even light literature may be educational literature for foreign-language students.

No efficient mutual assistance will be feasible unless an exchange of information is secured between libraries. The minimum we should insist upon is that every national library for the blind is kept informed about literature in stock in similar libraries abroad. Exchange of lists of books in braille and on tape may be a first step. To achieve this, simple catalogues must be compiled, with a separate list of authors attached, to facilitate the use of catalogues even by those who are not speaking the language concerned. This should also apply to lists of books for sale which are published by some institutions at regular or irregular intervals. To further closer contact libraries should also inform one another about their terms of lending and should exchange any additional information that may be useful.

If certain titles are in great demand in a given country, these may be exchanged for others, or even purchased from foreign libraries, thus shortening the lending distance between library and user. We have had quite satisfactory experience in this respect with Blindenstudienanstalt Marburg in the Federal Republic of Germany. This activity promises to be particularly successful in large areas sharing a common language, such as German or English. It goes without saying that exchange on this basis between libraries of different languages can be of great benefit to the libraries themselves. Books for foreign-language students are needed in every country, and in the long run it would undoubtedly be advantageous for all the larger libraries at least to have a certain stock of foreign-language standard literature.

Let me repeat a self-evident and well-known fact: smooth-running international lending arrangements will effectively help to increase the variety of books available to users in all countries of Europe.

International lending is an invaluable aid to publicising humanist ideas and it may be a contribution to closer links between the nations and to international friendship. No support should be given to literature which glorifies racism and violence.

Ease in handling is essential for international lending. Strong packing resistant to the stress of long mail distances is important. Handling should be made easy by the use of simple fastening devices, such as buckles or strings. Parcels must be readily identifiable as printed matter for a blind addressee. The reader must have no difficulty in fixing a return address on a parcel he wishes to send back.

So far, we know of two methods of international lending:

1. Books are received by the user direct from a library in another country;
2. Books from another country are received by the user through a library in his own country.

The GDR has adopted the second pattern, and a library for the blind in our country is part of our national library network. In this country, the borrowing of literature by blind people follows an international library system by which books from abroad are exchanged through and between libraries rather than between library and reader. Deutsche Zentralbücherei für Blinde, the leading national institution of the GDR in our field, will therefore undertake responsibility for proper import and export of books received from or sent to libraries outside the GDR. This method has worked most successfully in the past, and none of our partner libraries has had to suffer any loss. At the moment we have lending contacts with more than 30 countries, most of them naturally within the German-language area. Foreign-language lending, at present, accounts for about 20 per cent of our lending total. Some 30 per cent of our books sent abroad are sold.

All libraries should be prepared to concede individual lending deadlines to their foreign readers, to allow for both long mailing distances and prolonged use for study. This is done in our country with regard to foreign readers. Foreigners often need more time, because they also have to get familiar with the foreign language and foreign shorthand system.

We greatly appreciate the initiative taken by the European Regional Committee in the World Council for the Welfare of the Blind in organising this meeting in Oslo. It appears to be the first time that so many specialists from libraries and printing shops for blind people have come together for an international exchange of ideas and a review of their problems. Exchange of experience and contact established at such conferences will be essential if we are to improve and develop international lending arrangements. Contacts should also be made with a view to standardization of lending systems and terms.

I should like to propose the following conclusions which may be drawn from what has been said above:

1. International lending of braille and tape-recorded literature may be an important contribution to fostering good relations between nations. It will help to improve availability of books, facilitate learning of foreign languages, and provide the reader with access to works not available in her or his own country.

2. Libraries should exchange catalogues, lists of books for sale, and lending rules, undertake the exchange of experience on standardization of lending methods, introduce each other to users in their own countries, and spread information on each other's preferred specializations.

3. Libraries will allow individual lending deadlines for listeners and readers abroad.

Herbert Jacob
German Democratic Republic.

Recommendations from the Braille Conference of the E R C
in Oslo 26th-28th September, 1973.

The provision of special means of communication and the necessary apparatus and equipment are basic necessities in the rehabilitation and integration of the blind. To secure by law every blind person's right to these should be the duty of every country and its society. The participants in the European Braille Conference have unanimously expressed their opinion on questions regarding braille, literature in braille, and talking books in the following recommendations.

I. The importance of braille.

1. Braille is a basic aid for the blind which ensures their spiritual and cultural independence, furthers their social integration and increases their capability in the different fields of employment. During a century and a half, braille has proved its worth and has become a symbol of the independence of the blind. It will also continue to play its unique role in the future, while there are obvious limits to the use of optical and electrical reading aids.

2. To further and extend the knowledge and use of braille is still considered a task of cardinal importance by all organizations of the blind and institutions for the blind. They make every effort to convince the blind of the necessity of learning braille. They organize courses, publish instructive material in co-operation with libraries and other institutions, hold reading competitions and take other measures to encourage the learning of braille,

3. Braille systems should be easy to learn and easy to read. Systems of abbreviations must not constitute an additional obstacle to learning and reading braille.

4. The use of unabbreviated braille should ever be permitted in countries where literature in abbreviated braille has made up a large part of production. The saving of space in the production of braille literature must not be held to justify the reduction in the number of readers. It is better to have a large number of blind people reading a simple form of writing than just a small circle who command a complicated system of abbreviations.

5. The more extensive use of unabbreviated braille would also simplify the international exchange of braille literature. This is particularly the case with scientific works whose production is extremely costly and time-consuming. As braille systems in the different countries are developed, instructions should be published in a form which is readily intelligible to readers from other countries.

6. The extensive use of the tape-recorder (talking book) in the welfare of the blind has not reduced the importance of braille. There is a clear trend towards favouring the talking book for fiction, whereas scientific literature, professional and technical journals, reference books and music literature are mainly transferred into braille.

7. In transferring into braille the translation must be as exact a rendering of the original as possible. This is especially important in the case of scientific literature. Over-simplification must not put the blind reader at a disadvantage in comparison with the sighted reader. There are methods available in braille for ensuring a clear and exact translation. This is especially true in the production of school books.

II. The importance of special notation, signs and systems in braille.

1. In principle, anything which can be communicated in writing from one person to another, can be translated into braille. Therefore, in addition to the basic braille systems there exist systems for translating into braille music, mathematics, chemistry and recently also computer programming.

2. In the past several countries have developed their own specific systems. Scientific and technical progress, however, demand a far-reaching co-ordination of the various notation systems in the different fields. This is necessary in order to meet the increasing international demand for literature covering information and general, advanced and professional education.

3. Present conditions demand the further development of specific systems. Effective steps towards co-ordination must be taken as soon as possible. The Presidium of the E R C is recommended to appoint groups of specialists to the Braille Commission.

III. Transcription and Printing.

1. New methods of transcribing and printing braille will make it possible

a) to reduce the time needed for producing braille material,
b) to use ordinary typists instead of persons with knowledge of braille,
c) to print editions of any number required at reduced costs.

2. Two tendencies are becoming evident in the transfer of inkprint editions into braille:

a) the transfer which, by using different types of data-conveyors such as punch cards, punch tapes and magnetic tapes, results in the embossing of metal sheets,
b) the transfer of inkprint masters into braille direct on to paper by data-conveyors and computers without the process of embossing.

3. Several systems are used in printing braille:

a) the print is transferred direct on to paper by a "fast-printer". This makes for quick production of single volumes or small editions;

b) braille is embossed on to metal sheets from which editions can be printed of any size required;
c) braille is transferred to rotary cylinders which press plastic points on to the paper. This method is preferred when printing large editions, particularly periodicals;

d) when only a few copies are needed for immediate use, these can be obtained by the technically simple Thermoform-process. By this method plastic prints can be made from paper masters. This process is also well-suited for the production of material in relief.

IV. The importance of co-operation in production.

1. International co-operation is an effective means of improving the supply of literature to the blind.

2. Co-operation can commence with the exchange of production plans, thus avoiding duplication. The exchange and purchasing of titles in braille and on tape give further opportunities for co-operation. It should be noted that the light literature of one country may be used in other countries for teaching purposes and scientific research.

3. The demand for quality and quantity in braille paper is increasing. At the same time, the producers are only interested in large orders. Eventually this will make it necessary for the European countries to concentrate their orders on one or two producers. This is also true in the case of metal sheets for embossing. The first steps towards co-operation could be achieved through agreements and arrangements between neighbouring countries or other partners.

4. In the development of modern production centres for braille, the great size of investment involved and the high efficiency of the plant make it likely that bi-lateral agreements should be made. Furthermore, a single small country would be unlikely to have the financial capacity. The separation of the process of transcription from the actual printing process will prove advantageous as it will only be necessary to send the data-conveyors to the printing centre.

5. One should also strive to achieve international co-operation in the development of electronic equipment for the production of braille literature and embossing machines.

V. Periodicals for the blind.

1. Periodicals in braille and on tape make it possible to satisfy constant, immediate and varied demands. Periodicals already have a long tradition in blind welfare, and their part of the total production is steadily increasing.

2. In spite of high costs, periodicals in braille and on tape can only supply their readers and listeners with a small proportion of the information which is available to the sighted. All responsible agencies in the organizations of the blind, as well as in those institutions for the blind who are publishers and editors, should therefore do their utmost to increase the supply of information to the blind.

3. The ordinary periodicals serve to spread information and knowledge from political, social and cultural life, they offer entertainment and relaxation, and provide interesting information from the life of the organization, as well as the radio and television programmes.

4. A particularly important group of periodicals helps professional people in their work and further education. Periodicals are published for musicians, persons in administration and management, masseurs and physiotherapists, computer programmers, lawyers and students of foreign languages.

5. Periodicals for special groups are becoming increasingly important; for example, for children and young people, women, deaf-blind and people with religious interests. This is also the case with hobbies such as basket-making, amateur radio, gardening, Esperanto, puzzles, chess.

VI. The blind as readers, listeners and buyers.

1. The largest groups of readers are school children, students and professional people. If in addition to the full version there exists an abbreviated system, practically everything will be transferred into the abbreviated system. Titles in unabbreviated braille are in these countries only meant for beginners.

2. In most countries the number of braille readers has remained constant for years.

3. The number of people listening to tapes has shown a rising tendency over the years in the majority of countries. The proportion of fiction in talking book production is high; for some time, however, suitable scientific and professional literature has also been read on to tape.

4. Talking books are available for
a) cassette-players which can be bought in shops and which belong to the indivicual blind person. In some countries, the blind person receives the cassette-player as part of social welfare, in other countries organizations of the blind or institutions for the blind offer assistance. One should aim at a system by which cassette-players are put at the disposal of blind persons free of charge. These cassette-players should be of a type which combines recording and playing,

b) machines intended only for listening, for which the libraries produce special long-playing cassettes. In some countries these machines remain the property of the library.

5. Braille books are bulky and require a great deal of space. For this reason publications bought are mainly reference books, scientific titles and titles of particular literary value.

6. In some countries the actual price of production is charged for braille books; some producers give extensive rebates and price reductions, and a few sell their books at the shop price for the same book in ordinary print. Braille books should be as cheap as possible and should on no account be sold at a higher price than the the same book in ordinary print.

VII. International lending arrangements.

1. The active furthering of international lending arrangements for books in braille and on tape is a contribution to closer understanding and friendship between the nations. International lending arrangements serve to increase the supply of books, facilitate the learning of foreign languages and open access to special works which are not available in the native tongue.

2. The libraries exchange their catalogues, their lists of future publications and make their arrangements for lending books mutually

available. The internationally active libraries should be able to introduce each other to their readers and exchange information regarding their regulations for ordering and their specializations.

3. Free postage as well as the removal of all customs formalities are necessary in order to ensure easy and efficient international lending arrangements.

4. Libraries for the blind can organize their lending arrangements either though the other national libraries or through direct contact with the reader. They allow readers and listeners abroad special terms and develop a common international system.

5. An international agreement should be made regarding the form of packing to be used when sending braille literature, tapes and cassettes.

6. The organizations of the blind and institutions for the blind are recommended to get in touch with the responsible authorities in order to remove any remaining copyright difficulties. The W C W B is asked to put this problem before UNESCO and to work for a favourable arrangement.

Recommendation from the European Braille Conference
to organize a World Braille Year in 1975.

The European Braille Conference recommends the Presidium of the European Regional Committee and the Executive Committee of the WCWB to organize a World Braille Year.

The year 1975 marks a great occasion - one which is remembered with gratitude by the blind organizations of the world and by every single blind person : the 150th anniversary of braille.

In 1825 Louis Braille introduced his system of writing for the blind. Braille is one of the mainstays of modern blind welfare. The fact that blind people today are able to acquire a comprehensive education, to take part in work, and to make books part of their lives, is mainly due to Louis Braille's creation. Even music and the difficult formula of mathematics and chemistry can be translated into this writing with its six points. In fact, anything which can be communicated in writing from one person to another, can, in principle, be translated into braille.

The following are some of the various activities which should be recommended and be given special emphasis in the World Braille Year .

1. The international braille jubilee should be made an opportunity for spreading the knowledge of braille even more actively among the blind of all countries, so that as many blind people as possible may gain access to the treasures of literature and education.

2. In this work, one should make special efforts to encourage the blind of the new young nations and developing countries, whom the more advanced countries may help by the production and acquisition of braille books.

3. In view of the reputation which UNESCO, UNICEF and numerous other international organizations have achieved, and the prominent part they play in assisting their members through information, advice and encouragement, the leading agencies of the WCWB are recommended to establish contact with these organizations in order to co-ordinate plans in connection with the memorial year.

4. The organizations of the blind and for the blind should use every opportunity and means of publicity to inform the public of the importance of braille. Especially in schools, attention should be drawn to the personality of Louis Braille and his achievement.

5. In honour of the Braille Year, the various institutions might each translate one important work into braille. This work could be in unabbreviated braille, and should be preceded by a special dedication.

6. Braille reading competitions should be arranged in the different countries, in co-operation with the mass media. Furthermore, efforts should be made to arrange international reading competitions for the different language groups.

7. The national and international organizations could use the memorial year as an opportunity for initiating a variety of activities with a view to informing the public of the needs and achievements of blind people. A deeper understanding of the work of and for the blind is not only a necessary condition for the continued and even more active integration of the blind, but also a means of achieving it.

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Arne Husveg, Secretary General

Delegates to the Braille Conference in Oslo, 25. - 29. of September 1973

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